

VIDEO

FAQ

Q Do any high-definition video cameras record at the higher HD resolution of 1,920x1,080?

A HD devices must support at least one of the two main HD resolutions: 720p (1,280x720 pixels) and 1080i (1,920x1,080 pixels, interlaced). However, HD TVs and HD camcorders often have native resolutions that don't match these standards exactly. Most LCD TVs have a native resolution of 1,366x768, and they scale 720p and 1080i signals to fit the screen.

Most HD camcorders use the High Definition Video (HDV) format. This was designed to use the existing MiniDV tape format, which limits it to a resolution of 1,440x1,080, although this is still 3.75 times the resolution of PAL DV. The lower resolution means that each pixel is the equivalent of 1.33 pixels horizontally when displayed on a 16:9 HD display. The camera anamorphically squeezes the picture to store it on the tape and stretches it back out to display it.

If you want to record video at a resolution of 1,920x1,080, your best option is to invest in a hard disk camcorder. JVC's GZ-HD7 uses proprietary MPEG2 compression to store video to its built-in hard disk. Look out for a full review in next month's issue.

Seth Barton

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CANON HV20

★★★★★

£676 inc VAT



Canon's HV20 is the first consumer HD camcorder to provide a progressive scan option. This means it captures complete frames, just like a traditional film camera, rather than interlacing, which splits frames into a series of fields, each consisting of only the odd or even scan lines.

This won't magically transform your home videos into Hollywood epics, but you will get clearer footage and better motion. We had trouble getting our 18-month old test HD TV to display the progressive scan video at the HV20's video resolution of 1,440x1,080 pixels, however (see FAQ for more details).

The HV20 displayed stationary shots well, but panning was accompanied by a nasty juddering effect. This was a problem only when we connected the camcorder directly to the TV through the HDMI or component outputs. If you capture footage to a PC for editing first, you can export it in a standard progressive scan format, such as 720p.

Whether or not you use the progressive scan mode, this camcorder produces amazing footage. In ideal lighting conditions, image quality is very similar to that of the HV10 (see *What's New, Shopper* February 2007) with incredible detail and vibrant colours. In low light the interlaced video mode suffers quite badly from finely grained noise, but switching to progressive mode makes it finer still, and you'll barely notice it.

While the HV10 has a compact, upright design, the HV20 is a little larger, although this makes it easier to handle. Build quality is pretty average,



and the HV20 feels less sturdy than previous HD camcorders from Canon and Sony. The controls are well placed, though, and the small joystick is perfect for the easy-to-navigate menu system. The zoom toggle is poor and fiddly for long zooms, however.

The HV20 has a number of useful manual controls, all of which are easy to access. There's a manual focus dial, as well as aperture and shutter priority modes, giving you full control over tricky shots.

The LCD screen does a fairly good job of reproducing your HD footage, especially as it has only 211,000 pixels. The HV20 also has a viewfinder, although this is flush to the camcorder's body and doesn't tilt upwards or extend. The battery fits neatly in a recess, and you can fit a larger one if you don't mind it obstructing the viewfinder. The supplied battery lasted for an impressive 99 minutes of

constant HD recording. Video is recorded on 60-minute MiniDV tapes, which are still the best and cheapest way of storing high-quality video. The only downside is that transferring video to a PC in real time is rather laborious.

The HV20 is a great HD camcorder that captures excellent video. It's also the cheapest HD camcorder we've reviewed. With an excellent price and amazing picture quality, the HV20 is an excellent buy for anyone who wants to shoot HD footage.

Seth Barton

SUMMARY

- ✓ Excellent picture quality
- ✓ Good battery life
- ✗ Poor zoom control

HD CAMCORDER MiniDV storage, 10x optical zoom, 1/2in 2.96-megapixel CCD, 2.7in LCD screen, HDMI, component, composite and phono output, USB2 and FireWire interfaces
PART CODE 2060B006AA
SUPPLIER www.amazon.co.uk
DETAILS www.canon.co.uk

PERFORMANCE (see page 62)



Also consider...

SLING MEDIA Slingbox

★★★★★

£135 inc VAT



The Slingbox allows you to watch television anywhere in the world, as if you were sitting in your living room. It does this by streaming the video from your home over broadband, so you'll need an upload speed of at least 256Kbit/s. You can also use it on a home network and stream TV to a PC anywhere in your house using a wireless router.

It has SCART and S-video inputs, so you can plug in whichever set-top boxes you want. It also has a built-in Freeview tuner. It's simple to use, and even includes onscreen mock-ups of your remote controls.

This is a great product that's essential if you can't live without your TV.

VIDEO-STREAMING DEVICE SCART and S-video inputs, Freeview tuner, IR transmitter, 10/100 Ethernet port
PART CODE SB150-110
SUPPLIER www.laptopsdirect.co.uk
DETAILS www.slingmedia.com
✓ Works well with set-top boxes; easy to set up ✗ Can't timeshift Freeview FULL REVIEW Sep 2006



CANON MD101

★★★★★

£149 inc VAT



The MD101 is a great camcorder, at an extremely low price. It has a widescreen LCD, which means that what you see on the screen is what you get on your TV.

Picture quality is excellent in good lighting conditions, with realistic colours and very little noise. Only the lack of a USB port is disappointing.

PRICE CUT!



DV CAMERA MiniDV storage, 30x optical zoom, 1/6in 0.8-megapixel CCD, 2.7in LCD screen, phono and composite output, FireWire interface
SUPPLIER www.dabs.com
DETAILS www.canon.co.uk
PART CODE 1881B007AA
✓ Decent image quality; good battery life ✗ No USB port
FULL REVIEW Aug 2007



SANYO Xacti VPC-CA65

★★★★

£265 inc VAT



If you're planning a late summer holiday, chances are you'll spend some of it by the pool or on the beach. While you're having a quick dip, you might want to take a few photos or some video to show the folks back home. Fortunately, Sanyo's Xacti VPC-CA65 is waterproof, so you can lark around in the pool without worrying about getting your camcorder wet.

The CA65 is very much designed for fun. Its pistol grip and 236g weight makes it easy to use with one hand, leaving the other free to paddle or hold a cocktail. It even comes in three colours – blue, yellow and white – so you can coordinate it with your favourite swimming costume.

The CA65 captures both video and stills photos. Video is recorded at a maximum resolution of only 640x480. The results look poor on a big HD TV, but it's ideal for sharing video on the web. With this in mind, it uses H.264 video compression, so file sizes are small. Video quality is acceptable in bright conditions but suffers badly from compression artefacts in low-light conditions. Stills are acceptable, thanks to the 6-megapixel CCD, but close examination reveals a lack of detail. You would certainly get better pictures from a proper compact camera.

You can use standard SD memory cards or the newer and bigger SDHC cards to store your video and photos. As video is limited to

standard definition, you'll get plenty of footage on your card. Roughly 80 minutes of video will fit on a 2GB SD card. The small battery lasted for a respectable 99 minutes of continuous recording. Both the battery and SD card slot are easily accessed behind a watertight door on the rear of the pistol grip.

We tested Sanyo's waterproofing claims thoroughly. The CA65 is fully resistant to splashes, and running a tap on it caused no problems. It even works underwater to a depth of 1.5m, which is fine for use in the swimming pool or while snorkelling. A wrist strap is provided to ensure it doesn't end up on the sea bed. It is limited to 60 minutes underwater in any given stint. We doubt this would be a problem for most users.

One complaint is that the joystick control feels rather spongy, making it difficult to use. The LCD screen is large and fairly bright, but as there's no viewfinder, you'll be forced to squint at it on the brightest days. Surprisingly it comes without a lens cap, but there's a soft pouch to protect the lens and camera while you're not using it.

If you're looking for a waterproof holiday camera, the Xacti CA65 is more convenient than using a stills camera with a waterproof case. Alternatively, the high-definition Xacti VPC-HD1 is available for around the same price. Just don't try to take it underwater.

Seth Barton

SUMMARY

- ✓ Waterproof
- ✓ Compact and lightweight
- ✗ Low-resolution video

HD CAMCORDER SD or SDHC card storage, 5x optical zoom, 1/2.5in 6-megapixel CCD, 2.5in LCD screen, composite and phono output, USB2 interface.
PART CODE VPC-CA65EX
SUPPLIER www.purelygadgets.co.uk
DETAILS www.sanyo.co.uk

PERFORMANCE (see page 62)

Battery life **99m**

-50% Reference +50% +100%

CHOOSING A... TV Card

Follow the steps to find your ideal specs

INTERFACE: PCI
TUNES TO: Analogue
INPUTS: Radio frequency (RF)
CAPTURE FORMAT: N/A
HARDWARE COMPRESSION: No
Recommended minimum in grey

1 TV cards connect to PCs through a variety of interfaces. Internal cards fit into PCI or PCI-E x1 slots. Some double as graphics cards and use an AGP or PCI-E x16 slot. External devices with USB interfaces are easier to install, but use up a USB port. USB stick and PC Card versions are also available and are ideal for notebooks.

2 Most devices tune to either analogue or digital TV broadcasts from an external aerial, but hybrid devices can receive both types of broadcast. Terrestrial digital TV, or Freeview as it's commonly known in the UK, provides extra free channels, but you can't access subscription channels with a TV tuner card. Analogue broadcasts can give a superior picture to digital broadcasts, but digital tuners don't suffer from noise and ghosting when reception is poor – although they may cut out altogether. Check the digital reception in your area by going to www.freeview.co.uk and entering your postcode.

3 Basic devices provide an RF input for connecting an aerial. To connect an analogue video device, such as a camcorder or VCR for video editing, look for a composite or, preferably, S-video input. Digital tuners tend not to include this feature. Buy a hybrid device if you want to receive digital TV and capture analogue video.

4 If you want to use your PC for video editing or as a digital video recorder, you'll need to capture video in an appropriate compression format. The most practical format is MPEG2, which gives excellent quality and reasonable file sizes.

A PC with a 1GHz or faster processor can compress video to MPEG2 format in software, while slower machines need hardware compression on the card. Digital TV is broadcast in MPEG2 format, which makes recording to disk easy. Expect an hour of MPEG2 video to take up roughly 1.5GB of hard disk space.

5 Factor in any extras you want, such as an FM radio, a remote control and software for scheduled recordings and pausing live TV.

TERRATEC Cinergy DT USB XS Diversity

★★★★★

£66 inc VAT



This USB TV tuner has a diversity mode that takes a signal from two tuners and aerials to improve reception in areas with weak signal strength. Alternatively, you can use the tuners independently to receive one programme while recording another.

The included software is easy to use, image quality is good, and the remote control is clearly labelled. The USB XS Diversity is the best dual tuner we've seen.

USB TV TUNER USB2 interface, dual digital tuners, 2x RF inputs
PART CODE 10456 SUPPLIER www.pixmania.co.uk DETAILS <http://uk.terratec.net> ✓ Twin tuners with diversity; can schedule two recordings at once ✗ No timeline EPG
FULL REVIEW Apr 2007



TOP UP TV TUTV Anytime DTR

★★★★★

£140 inc VAT



This hard disk Freeview recorder

has twin tuners, so you can watch one programme while recording another. It has a 160GB hard disk, which is enough for more than 100 hours of recordings.

As well as the usual Freeview broadcasts, you can opt to receive additional Top Up TV programming downloaded to the hard disk for £10 a month. It's an inexpensive way of improving your TV viewing.



HARD DISK RECORDER 2x digital tuners, 160GB hard disk, RF input, RF output, 2x SCART, S-video, composite, stereo phono and coaxial S/PDIF output SUPPLIER Top Up TV 08700 543210 DETAILS www.topuptv.com ✓ Subscription service ready ✗ Commitment to subscribe; awkward EPG FULL REVIEW Jul 2007